

Aquatic Weed Removal

Department of Biological Engineering

Client: Arboretum Associates

Lead Instructor: Dr. Dev Shrestha

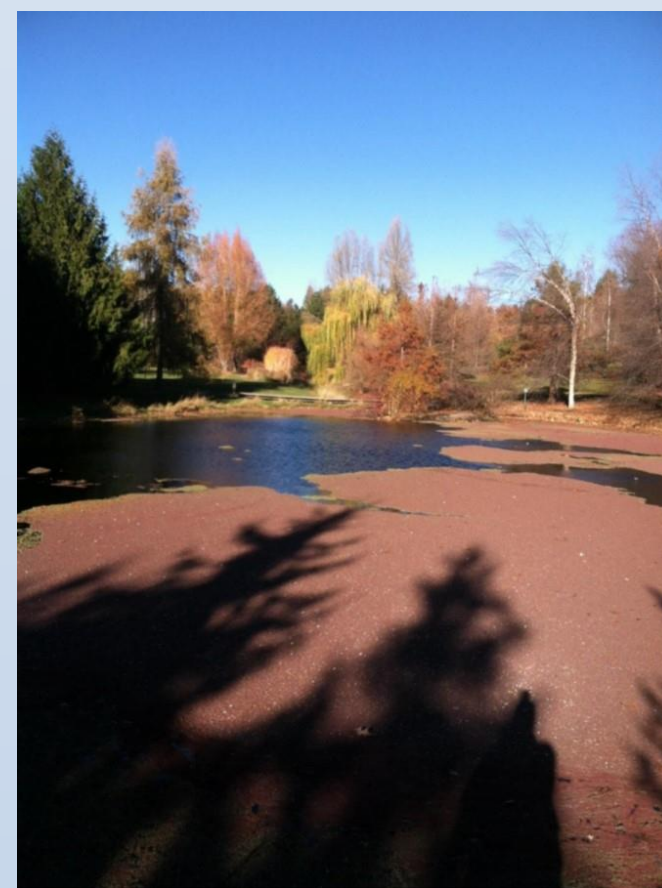
Problem:

The ponds in the University's Arboretum suffer from excessive algae growth.

- Azolla
- Duckweed
- Water Meal



Arboretum Ponds



After multiple attempts of chemical treatment and use of small machinery over the past years, the problem persists.

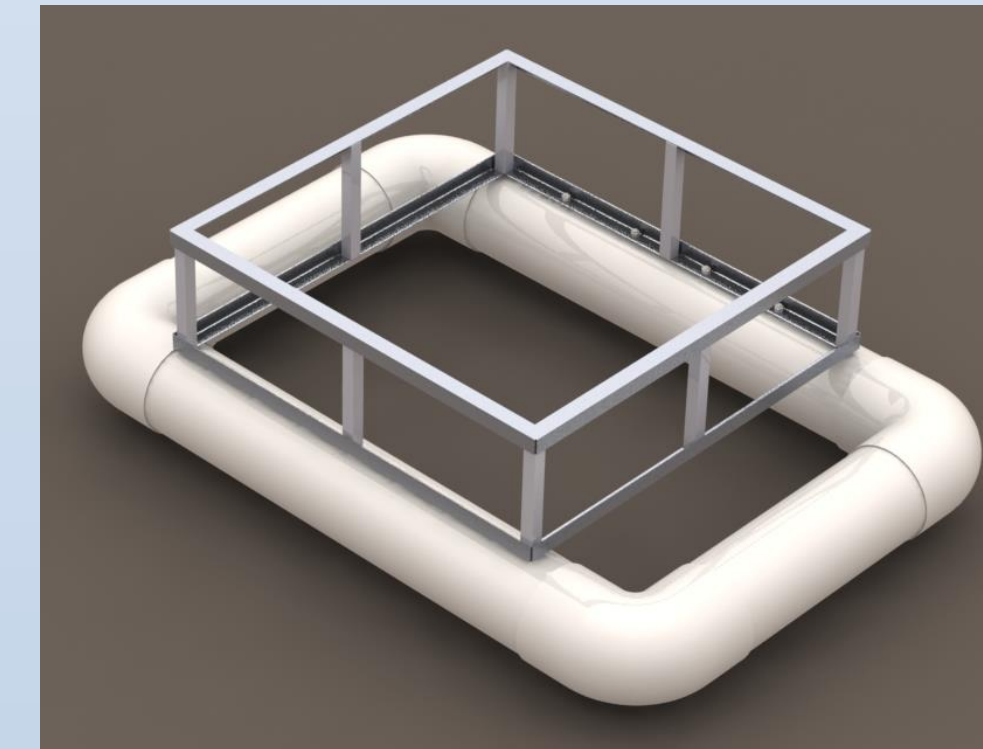


Stephen Walters Autumn Pratt Sarah Willis Nicole Fletcher Bryan Barret

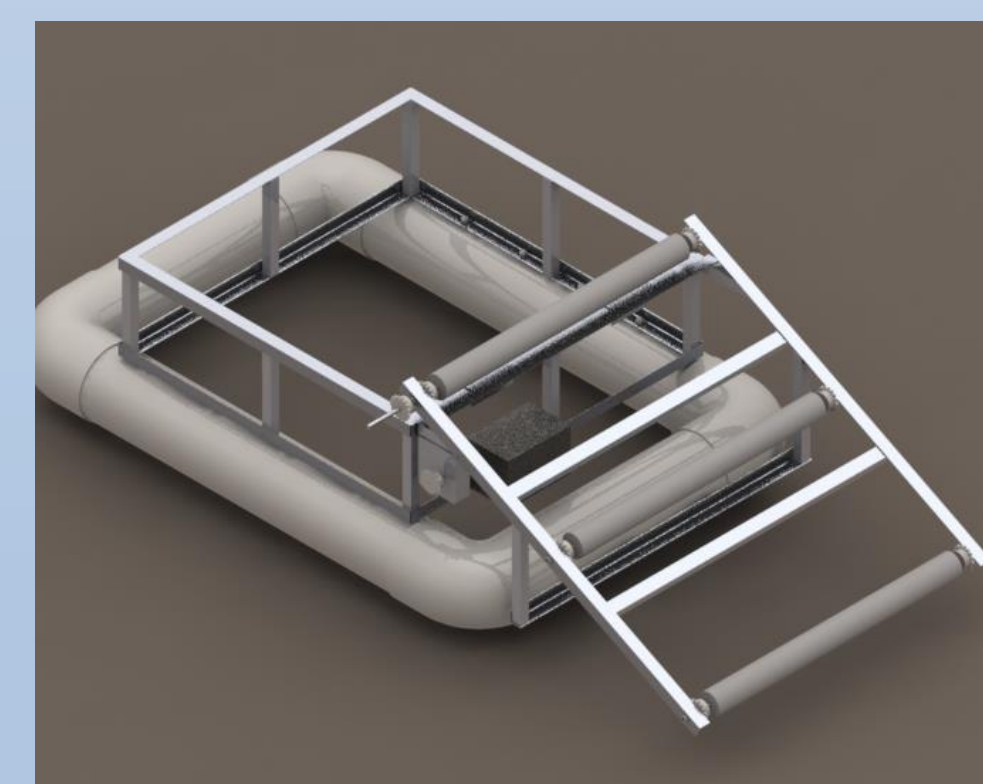
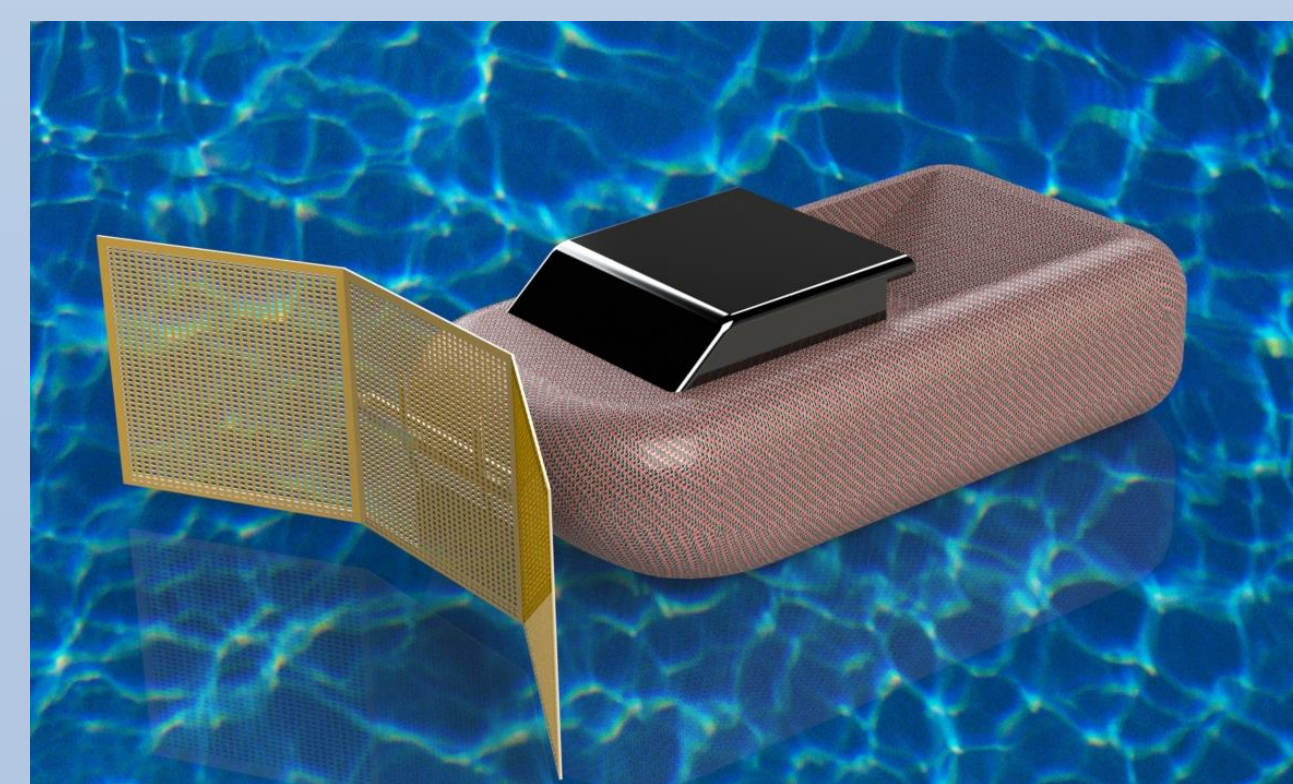
Brainstorming:

Project Specifications:

- Lightweight/Easy to handle
- Reduce weed growth in ponds
- Require little man hours
- Safe for environment and user



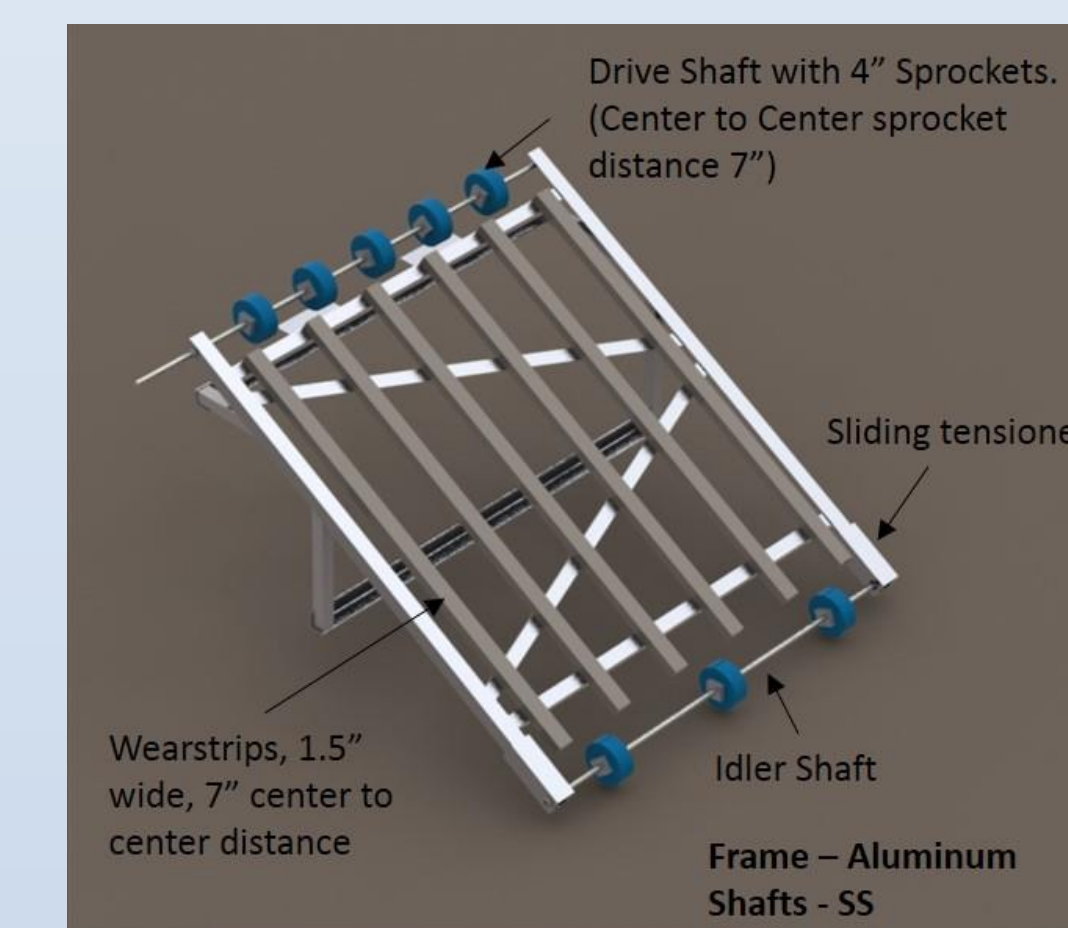
PVC body for maximum water displacement/buoyancy



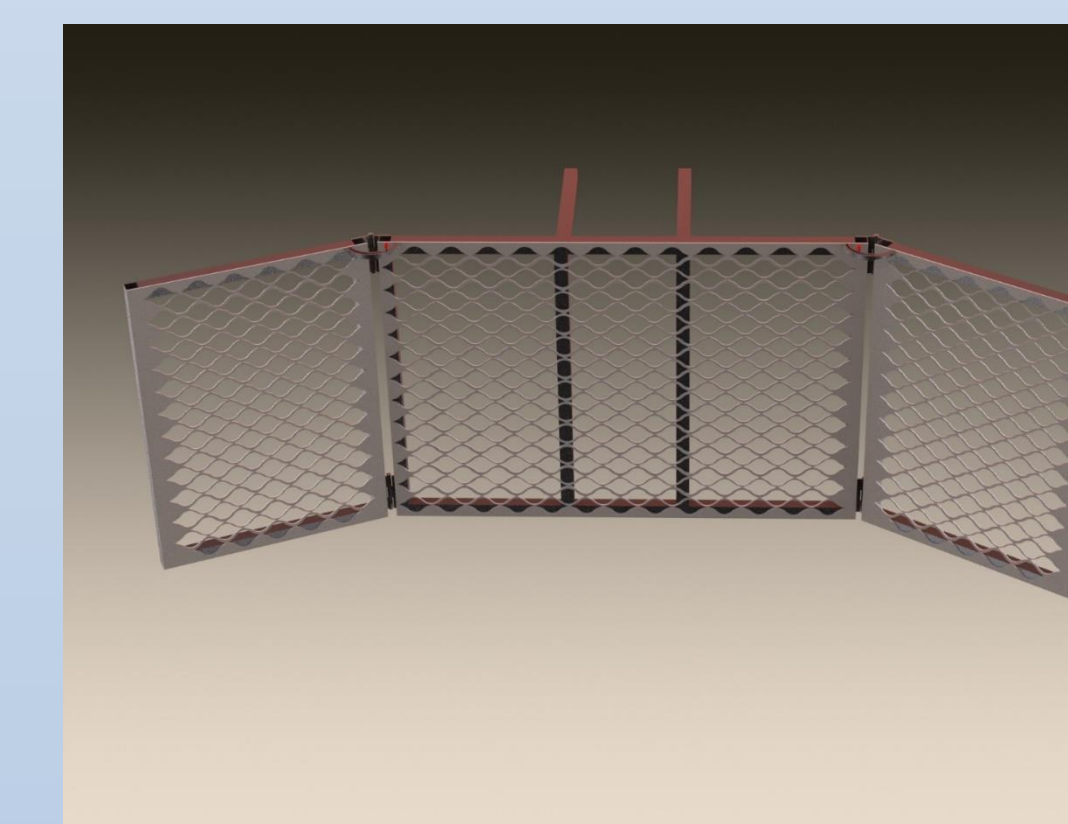
Inspired by existing design, the water plow and conveyor belt became part of our solution early on.

Our Solution:

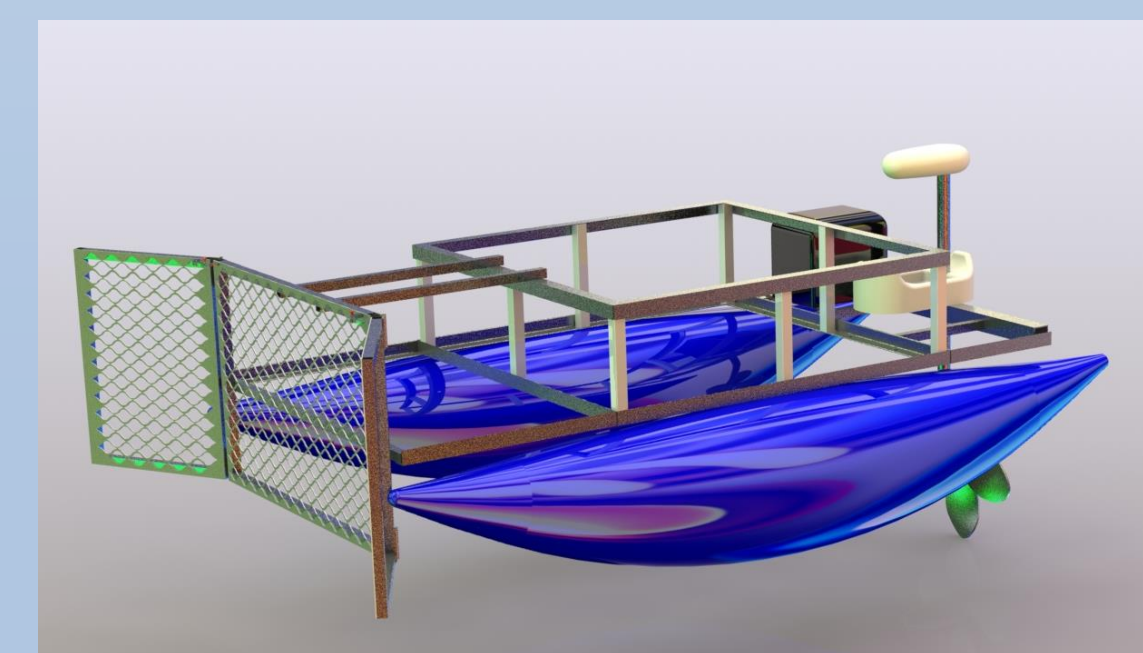
- Conveyor Belt
- Water Plow
- Light Weight Body



Conveyor belt is about 3 feet wide, and meant to ride on the front of the water craft, sucking aquatic weeds out of the water as it travels.



Water plow interchangeable with conveyor, about 6 ft. at widest span, used when algae problem at worst conditions. May be used to push weeds to shore, or onshore conveyor.



PVC replaced with pontoons for weight reduction and added buoyancy. Body powered by remote-controlled trolling motor. Frames of all components made of aluminum.

